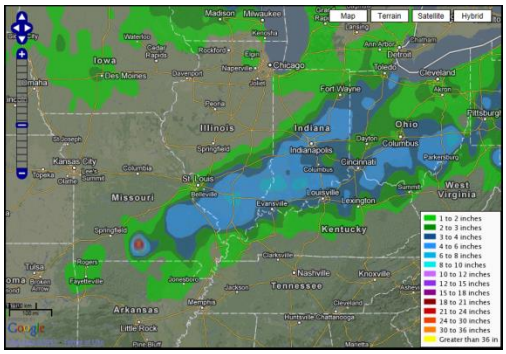
A Look Back at 2013 in Central and Southeast Illinois

2013 started off rather mild, but then turned cool, and finished rather cold. Some of the most impactful events occurred well out of season, with the largest snowstorm of the year in late March, and the largest tornado outbreak in the middle of November. Despite having one of the wetter springs on record, which caused record flooding on many rivers, severe drought established itself again during the late summer and early fall.

Season by Season Highlights:

Winter Season (December 1, 2012 through February 28, 2013):



Snowfall from the second of two winter storms to affect the Midwest the last week of 2012; this image is from the December 28 storm.

Seasonal averages:

- **Temperatures:** Above normal
- **Precipitation:** Above normal

Temperature Review --

The winter started with unseasonably mild weather, with temperatures in the 60s and 70s on December 1-3. The high of 74 degrees at Springfield on the 3rd tied the December record high. While temperatures moderated somewhat by the 10th, average temperatures for the first half of the month ranged from 8 to 13 degrees above normal. A significant cooling trend set up for the second half of the month, with high temperatures frequently near or below normal for the 21st onward. This colder trend ended on January 3, although there was also significantly colder weather from the 21-22nd. Several record highs were set on the 28th when temperatures reached the mid to upper 60s. While colder weather during the second half of February led to the month overall averaging near or just below normal, the winter season as a whole averaged warmer than normal, and below zero days were infrequent.

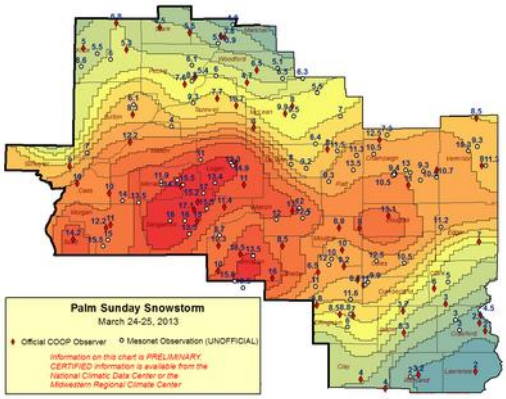
Weather Review --

Dry conditions affected a good portion of the area during the first half of December, especially northwest of I-55. However, a narrow strip from Pana to Paris saw above normal precipitation during the period, as well as locations near and just north of Springfield. Snowfall had largely been limited to flurries, and most of the area had not seen measurable snowfall since March 5 (a period of 286 days as of December 15).

The second half of the month started seeing more frequent winter weather conditions. Two significant storms occurred during the period. The first was on December 20, when areas along and west of I-55 saw widespread blizzard conditions with the passage of an intense low pressure area. The highest amounts of 3 to 5 inches occurred west of the Illinois River, and many areas saw wind gusts of 50 to 60 mph or higher. The following week, blizzard conditions occurred in southeast Illinois on the 26th, as part of a storm system that produced widespread heavy snow across the western Ohio Valley northeast into Indiana. Snowfall amounts were close to a foot around Lawrenceville. However, there was a very sharp cutoff to the snow, with only around an inch near Effingham, and very little snow west of an Effingham to Champaign line in general. Another 7 inches occurred near Lawrenceville on the 28th, and there were 16 inches on the ground there the next morning, the highest snow depth on record in Lawrenceville.

Snowfall was below normal over much of January and the first part of February; Springfield only saw a trace of snow during the month of January. However, the last 2 weeks of February produced a couple widespread accumulating snows. The most significant snow events in February occurred on Thursday, February 21st and Tuesday, February 26th. The first event featured a strong low pressure system shifting northeast from the Plains, but weakening as it approached central Illinois. A band of heavy snow pushed out ahead of this system, and produced several inches of snow within a few hours during the afternoon. However, as this snow band lifted northeast it quickly weakened during the evening hours and snowfall amounts tapered off. The second event featured deep moisture from the Gulf of Mexico, and with warmer air in place ahead of this system, moderate to locally heavy rain affected much of the area during the early morning of February 26, with 1 to 1.5 inches common. Colder air gradually filtered in from the northwest and changed the rain over to snow. Moderate snow intensity affected much of central and northern Illinois into the evening hours.

Spring Season (March 1 through May 31):



Snowfall from the record-setting Palm Sunday snowstorm of March 24-25. **Seasonal averages:**

- **Temperatures:** Below normal
- **Precipitation:** Above normal

Temperature Review --
After March of 2012 finished as the warmest on record in many areas, March 2013 was a significant shift in the other direction. Average temperatures for the month were 5 to 7 degrees below normal, with a significantly colder than normal period from the 20-28th. The cool weather continued as April began, but highs in the 70s were being reported from the 6-9th, although the month as a whole averaged below normal as well. Spring planting ran behind due to the cool and wet conditions. More substantial warmer weather occurred in May, especially from the 14-15th when highs were around 90 in some areas.

Weather Review --
Winter made one last gasp late in March, resulting in snowfall setting all-time records in some areas. A storm system produced a rain/snow mixture the night of March 23, which changed to all snow and was very heavy on Sunday, March 24. The occurrence of thunderstorms helped to enhance the snowfall amounts. By the time the storm was done, snowfall totals of 12 to 18 inches were widespread from Winchester, eastward through Springfield and Lincoln, to Decatur, then south to near I-70. The daily snowfall at Springfield of 17.0 inches on the 24th broke the all-time 24-hour snowfall record of 15.0 inches that was set February 28, 1900; all-time records were also set at Taylorville (17.7 inches, old record 13.0 inches on January 15, 1968) and Pana (13.8 inches, old record 11.1 inches on March 8, 1978). Decatur tied its 2nd snowiest day on record with 13.0 inches, and Urbana had its 2nd snowiest day on record with 11.5 inches. In several cases, the snowfall from this single storm surpassed the entire total for the rest of the winter.

Excessive rainfall during the middle of April led to widespread flooding across a large part of northern and central Illinois. Areas from the Chicago metro, southwest along the Illinois River Valley, received 5 to 10 inches over a two day period from the 17-18th. This caused record flooding along portions of the Illinois, Spoon, and Mackinaw Rivers in central Illinois. New all-time record river stages were recorded at Henry, Peoria, Havana, and Beardstown along the Illinois River, at Seville on the Spoon River, and at Green Valely on the Mackinaw River.

May was one of the wetter ones on record. Widespread areas from Galesburg to Taylorville westward received over 10 inches of rain during the month; new monthly records were established at Galesburg (11.99 inches), Havana (11.73 inches), Virginia

(11.60 inches) and Winchester (11.27 inches). While heavy rain occurred on May 2-3, especially over west central Illinois where 3 to 4 inches or more occurred, a lot of the heavier rain fell during the last several days of the month. The 7-day period encompassing the Memorial Day weekend through the end of May saw several areas of 4 to 7 inches, with lower totals around Champaign. Flash flood warnings were in effect in many areas at different times through the last week of May, due to the heavy rain and slow storm movement. Lingering flooding on the Illinois River, which had been close to subsiding at Havana and Beardstown from the April record flooding, reversed course and river levels were significantly rising again by the end of the month. Moderate flooding also occurred on the Spoon River, and the flooding on the Illinois River had become more widespread again both upstream of Havana and downstream of Beardstown. At the end of the month, flooding also began developing on portions of the Embarras and Little Wabash Rivers in southeast Illinois.

Severe weather began to increase in late May. On Memorial Day, strong storms developed in west central Illinois early in the afternoon, and became severe as they pushed through the Springfield area. Winds of 60 to 65 mph occurred in parts of Springfield and Rochester, causing damage to trees and power lines, with extensive tree damage occurring at the Henson Robinson Zoo along the shores of Lake Springfield. Just outside of Riverton, a microburst damaged several dozen manufactured houses at a trailer park. Damage from these storms also affected Decatur and Forsyth. More widespread severe weather occurred on Thursday, May 30, with many reports of wind damage. On Friday, May 31, another round of severe weather developed, most prominently in the evening as a squall line exited the St. Louis metro after causing several tornadoes in that area. These storms again caused mainly wind damage as they pushed through central and southeast Illinois, with the most extensive damage in Decatur and Argenta.

Summer Season (June 1 through August 31):

A rare display of the Northern Lights in central Illinois on June 28. This picture was taken by Jodi Irvin near El Paso.

Seasonal averages:

- **Temperatures:** Below normal (except near normal northwest of the Illinois River)
- **Precipitation:** Below normal in central Illinois, and above normal in southeast Illinois

Temperature Review --

June started out with cooler than normal temperatures over a large part of the Midwest. In central Illinois, lows fell into the mid to upper 40s along and north of I-74 on the 4th. However, temperatures started warming up again as mid-month approached. By the 12th, high temperatures were well into the 90s, with record highs tied at Minonk (96 degrees) and Springfield (95 degrees), and set at Morrisonville (95 degrees). While temperatures cooled a bit for the rest of the month, humidity levels were on the increase, especially from the 21-28th. However, in July, Canadian air masses frequently moved through the area. One particularly cool period from the 24-31st resulted in several record lows occurring, including 48 degrees in Springfield and Lincoln on the 28th. The trend for well-below normal temperatures continued well into August, with 90s not becoming prevalent again until the last few days of the month.

Weather Review --

Much of the Midwest saw rainfall well above normal for June. The only real exceptions in Illinois were in areas west of Galesburg, and also north of Lacon. Southeast Illinois was especially hard hit, with many areas south of I-70 receiving at least 10 inches of rain. At Flora, a total of 12.63 inches was observed during the month, breaking the June record of 10.33 inches set in 2011. Near Clay City, a total of 9.16 inches broke the old record of 8.52 inches set in 1997, and Olney's total of 8.70 inches was the 3rd wettest June on record. Further north, heavy rain developed from Peoria northward early on June 24th. Accumulations of 5-6 inches were reported near Toulon, with the west side of Peoria reaching 5.75 inches, 5.15

inches in Germantown Hills, and 5.10 inches at Dunlap, causing flash flooding. The heavy rain caused a sinkhole to develop near a runway at the Mount Hawley Auxiliary Airport. However, the Peoria airport only reported half an inch from the storm.

Severe thunderstorms started to become more common later in June. While a major severe weather outbreak stayed just to the north on the 12th, reports of severe weather were scattered over the area on the 17-18th, and from the 21-25th. These reports generally consisted of damaging winds or large hail, and were most numerous on the 24-25th. Golfball size hail was reported on the 24th in Astoria (Fulton County) and Oakley (Macon County). On the 29th, several funnel clouds were reported near Decatur, Champaign, Mattoon, and Arthur, mostly due to weak boundaries and cold air aloft, with one reportedly touching down in Douglas County, causing minor damage near Cooks Mills.

Dry conditions started to set up again during the middle of the summer, and by August, monthly rainfall was generally less than an inch. Jacksonville observed only 0.03 inch of rain during the month, with 0.09 inch at Decatur, and 0.22 inch at Galesburg. This resulted in some redevelopment of drought conditions.

Autumn Season (September 1 through November 30):

Severe damage in Washington (Tazewell County) caused by an EF-4 tornado on November 17.

Seasonal averages:

- Temperatures: Near normal north of I-74, below normal south
- Precipitation: Below normal (except above normal along the Wabash River)

Temperature Review --

The fall season started off very warm, with highs reaching the mid to upper 90s over much of the area on the 9-10th. Record highs were reported at Hoopeston, Urbana, Galesburg, and Normal. Another hot period followed on the 19th, as highs again reached the 90s. A more substantial cooler period finally took hold around mid October, and persisted month of the remainder of the month and most of November as well. Near record highs on November 16-17th helped fuel severe weather which affected the area (see below).

Weather Review --

A major late-season severe weather outbreak produced 10 tornadoes across central and southeast Illinois on November 17. An EF-4 tornado, which touched down near East Peoria and moved through Washington, was on the ground for 46 miles before finally lifting in western Livingston County; this was the first EF-4 strength tornado in central Illinois since July 2004. EF-3 strength tornadoes affected parts of Douglas, Champaign, and Vermilion Counties, with areas around Gifford and Villa Grove hardest hit. A total of 25 tornadoes occurred in Illinois during this outbreak, which was the 4th largest outbreak in the state since 1950; the Washington EF-4 tornado was the strongest November tornado observed since reliable records began in 1950.

Drought conditions lingered early in the fall season, especially from around Decatur and Bloomington northwest, but improvements began to take hold in early November. By the end of the season, severe drought was confined to a small area between Lincoln and Champaign.

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Winter Season to Date (December 1-23):

Map of heavy snow that occurred in southern Illinois on December 5-6. .

Seasonal averages to date:

- **Temperatures:** Below normal
- **Precipitation:** Above normal east of I-57, below normal west

Temperature Review --
Much of the Midwest was locked into a persistent pattern of cold weather much of the month. Temperatures from the 6-12th were generally from 15 to 20 degrees below normal. The only significant warmer periods were the first few days of the month, especially the 4th (with highs near 60) and from the 19-20th when highs rose well into the 60s in many areas.

Weather Review --
With the colder weather, snow was a frequent visitor to the area. One storm on the 5-6th produced several inches of snow south of I-70, with close to a foot around Lawrenceville. Another significant snowfall on the 13-14th produced 4 to 7 inches in many areas, with some higher 8 to 10 inch amounts from Rushville to Peoria, and also from Pana to Danville. A third storm on the 20-22nd favored heavy rainfall in southeast Illinois with 2 to 4 inches common, with freezing rain further northwest, especially I-55 northwest. However, a few inches of snow did fall around Galesburg.

Preliminary statistics for the 35-county Lincoln NWS coverage area:

- **Highest Temperature:** 99 degrees at Peoria and Altona on August 30, Lawrenceville Airport on August 31, and Normal on September 10
- **Lowest Temperature:** 12 below zero at Altona on December 24
- **Most Rain in 24 Hours:** 5.75 inches at Knoxville on April 18
- **Most Snow in 24 Hours:** 17.7 inches at Taylorville on March 24-25
- **Most Rain in 1 Month:** 12.63 inches at Flora in June
- **Most Snow in 1 Month:** 22.5 inches at Lake Springfield in March
- **Reported Tornadoes:** 14. By EF-scale: EF-4=1, EF3=2, EF2=3, EF1=6, EF0=2. By county: Douglas 3, Vermilion 3, Champaign 2, Christian 2, Tazewell 2. One each in Coles, Effingham, Jasper, Macon, Moultrie, Peoria, and Woodford. (Total is >14 due to border crossers.)